

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Previously Amended) An electronically commutated brushless motor comprising:

a motor housing defining a cavity which is configured to at least partially receive a rotor, the motor housing including an integrally formed sidewall having a bulge therein, the bulge defining a hollow area that is offset from the cavity, the hollow area being bounded by the sidewall in a direction radially outwardly of the cavity; and

a capacitor assembly including a printed circuit board and at least one capacitor, said capacitor assembly housed in said bulge and electronically controlling commutation of the electronically commutated brushless motor.
2. (Original) The motor of Claim 1 wherein said capacitor assembly is slideably inserted into said bulge.
3. (Original) The motor of Claim 1 wherein said bulge comprises a plurality of channels located along an inside surface of a sidewall of said bulge.
4. (Original) The motor of Claim 3 wherein said capacitor assembly comprises:

a capacitor printed circuit board (PCB) comprising a plurality of longitudinal edges; and

at least one capacitor mounted on said capacitor PCB.

5. (Original) The motor of Claim 4 wherein said longitudinal edges of said capacitor PCB are slideably inserted in said channels.

6. (Original) The motor of Claim 4 wherein said capacitor assembly further comprises a plurality of stiffeners, one of said stiffeners being attached to each of said longitudinal edges of said capacitor PCB, and said stiffeners being slideably inserted in said channels.

7. (Original) The motor of Claim 6 wherein said stiffeners have a tapered shape, and said channels have correspondingly tapered shape.

8. (Previously Amended) A method for constructing an electronically commutated brushless motor, said method comprising:

forming a motor housing with a cavity that is configured to at least partially receive a rotor, the motor housing including an integrally formed sidewall having a bulge therein, the bulge defining a hollow area that is offset from the cavity, the hollow area being bounded by the sidewall in a direction radially outwardly of the cavity;

providing a capacitor assembly; and

slideably inserting the capacitor assembly into the bulge.

9. (Original) The method of Claim 8 wherein providing a capacitor assembly comprises:

providing a capacitor printed circuit board (PCB) having a plurality of longitudinal edges; and

mounting at least one capacitor on the capacitor PCB.

10. (Previously Amended) The method of Claim 9, wherein the motor housing includes a pair of capacitor assembly engagement features that are formed on an inside surface of the sidewall proximate the bulge, wherein the capacitor PCB includes a pair of longitudinal edges and wherein the step of slidably inserting the capacitor assembly includes engaging the longitudinal edges of the capacitor PCB to the capacitor assembly engagement features.

11. (Original) The method of Claim 8 wherein providing a capacitor assembly comprises:

providing a capacitor PCB having a plurality of longitudinal edges;

mounting at least one capacitor on the capacitor PCB; and

attaching a stiffener to each longitudinal edge.

12. (Previously Amended) The method of Claim 11, wherein the motor housing includes a pair of capacitor assembly engagement features that are formed on an inside surface of the sidewall proximate the bulge and wherein the step of slidably inserting the capacitor assembly includes engaging the longitudinal edges of the capacitor PCB to the capacitor assembly engagement features.

13. (Original) The method of Claim 11 wherein attaching a stiffener comprises attaching a drafted stiffener having a tapered shape to each longitudinal edge.

14. (Previously Amended) The method of Claim 13, wherein the motor housing includes a pair of capacitor assembly engagement features that are formed on an inside surface of the sidewall proximate the bulge, the engagement features having a tapered shape corresponding to the tapered shape of the drafted stiffeners, and wherein the step of slidably inserting the capacitor assembly includes engaging the longitudinal edges of the capacitor PCB to the capacitor assembly engagement features.

15. (Previously Amended) An electronically commutated brushless motor comprising:

a motor housing with a cavity that is configured to at least partially receive a rotor, the motor housing including an integrally formed sidewall and a plurality of capacitor assembly engagement features, the sidewall having a bulge therein, the bulge

defining a hollow area that is offset from the cavity, the hollow area being bounded by the sidewall in a direction radially outwardly of the cavity, the capacitor assembly engagement features being integrally formed with the sidewall and being located in a vicinity of the bulge; and

a capacitor assembly slideably inserted in said bulge and engaging the capacitor assembly engagement features.

16. (Original) The motor of Claim 15 wherein said capacitor assembly comprises:

a capacitor printed circuit board (PCB) comprising a plurality of longitudinal edges, said longitudinal edges slideably inserted in said channels; and

at least one capacitor mounted on said capacitor PCB.

17. (Original) The motor of Claim 15 wherein said capacitor assembly comprises:

a capacitor PCB comprising a plurality of longitudinal edges,

at least one capacitor mounted on said capacitor PCB; and

a stiffener attached to each of said longitudinal edges of said capacitor PCB, said stiffeners slideably inserted in said channels.

18. (Original) The motor of Claim 15 wherein said capacitor assembly comprises:

a capacitor PCB comprising a plurality of longitudinal edges,

at least one capacitor mounted on said capacitor PCB; and

a drafted stiffener having a tapered shape attached to each of said longitudinal edges of said capacitor PCB.

19. (Original) The motor of Claim 18 wherein said channels have a tapered shape corresponding to the tapered shape of said drafted stiffeners, and wherein said drafted stiffeners are slideably inserted in said tapered channels.

20. (Previously Added) The method of Claim 10, wherein the capacitor assembly engagement features are channels that are integrally formed with the sidewall.

21. (Previously Added) The method of Claim 12, wherein the capacitor assembly engagement features are channels that are integrally formed with the sidewall.

22. (Previously Added) The method of Claim 14, wherein the capacitor assembly engagement features are channels that are integrally formed with the sidewall.

23. (Previously Added) The motor of Claim 15, wherein said capacitor assembly includes a capacitor printed circuit board (PCB) with a pair of laterally spaced-apart longitudinal edges and wherein the capacitor assembly engagement features engage the longitudinal edges of the capacitor PCB.

24. (Previously Added) The motor of Claim 15, wherein said capacitor assembly includes a capacitor printed circuit board (PCB) and plurality of stiffeners, each of the stiffeners being coupled to one of the opposite longitudinal edges of the capacitor PCB and wherein the capacitor assembly engagement features include a pair of channels that slidably receive the stiffeners.

25. (Previously Added) The motor of Claim 24, wherein the stiffeners include a leading portion and a trailing portion, the leading portion being configured to be inserted into the motor housing before the trailing portion, the leading portion being smaller than the trailing portion so as to provide at least a portion of the stiffeners with a tapered shape.

26. (Previously Added) The motor of Claim 25, wherein the channels are tapered in a manner that conforms to the tapered shape of the stiffeners.

27. (Currently Amended) An electronically commutated brushless motor comprising:

a motor housing having a sidewall;

a bulge integrally formed in a sidewall of said motor housing; and

a capacitor assembly including a printed circuit board and at least one capacitor, said capacitor assembly housed entirely in said bulge and adapted to be slidably inserted into said bulge along a path extending generally parallel to a central longitudinal axis of said housing.

28. (Cancelled)

29. (Previously Added) The electronically commutated brushless motor of Claim 28, wherein a pair channels are formed into the sidewall adjacent the bulge.

30. (Currently Amended) The electronically commutated brushless motor of Claim 29, wherein the capacitor assembly includes a capacitor printed circuit board, and wherein the channels are configured to engage the opposite lateral sides of the capacitor printed circuit board.

31. (Previously Added) The electronically commutated brushless motor of Claim 30, wherein the capacitor assembly includes a pair of stiffeners for supporting the capacitor printed circuit board and wherein the stiffeners are also received into the channels.

32. (Previously Added) The electronically commutated brushless motor of Claim 31, wherein at least a portion of each stiffener has a tapered shape.

33. (Previously Added) The electronically commutated brushless motor of Claim 32, wherein at least a portion of each channel is tapered in a manner that corresponds to the tapered shape of the stiffeners.

34. (Previously Added) The electronically commutated brushless motor of Claim 29, wherein the capacitor assembly includes a pair of stiffeners for supporting the capacitor printed circuit board and wherein the stiffeners are received into the channels.

35. (Previously Added) The electronically commutated brushless motor of Claim 34, wherein at least a portion of each stiffener has a tapered shape.

36. (Previously Added) The electronically commutated brushless motor of Claim 35, wherein at least a portion of each channel is tapered in a manner that corresponds to the tapered shape of the stiffeners.

37. (New) An electronically commutated brushless motor comprising:
a motor housing having a cavity which is shaped to at least partially receive a rotor, the motor housing including an integrally formed sidewall having a bulge therein, the bulge defining a hollow area offset from the cavity;

a capacitor assembly including a printed circuit board and at least one capacitor, said capacitor assembly being insertable into said hollow area of said bulge and electronically controlling commutation of the electronically commutated brushless; and

wherein said capacitor assembly is substantially entirely encapsulated within said bulge.